

BLUE

Dart Aerospace Ltd.

Date: Friday, 13/06/2008 10:46:16 AM
 User: Julie Lecocq

Process Sheet

slp 04/02

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	206L AFT X-TUBE
Job Number :	39852	Part Number :	D206667203BL
Estimate Number :	10973	Drawing Number :	D206-667-243 REV B + DSI 9415 08.06.13
P.O. Number :		Project Number :	N/A
This Issue :	13/06/2008	S.O. No. :	
Prsht Rev. :	NC	Drawing Revision :	
First Issue :	1/1	Material :	
Previous Run :	34483	Due Date :	30/06/2008
Written By :		Qty:	1 Um: Each
Checked & Approved By :	JUD 08.06.13		
Comment :	Est Rev:F 05.09.01 Add holes for compatibility with Bell Skidtubes KJ/JLM		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
----------------	------------------------------	----------------------

1.0 DC

DOCUMENT CONTROL



JLD

08.06.16

Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D206-667-203 CHG002 CHG003 + DSI 9415 08.06.13

2.0

D6004115

Crosstube Material



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D6004-115 Crosstube

Check OD = 2.500"; ID = 1.800"

3.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA089

2-Turn first side as per Folio FA089

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-243.

4.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

See work on stakeholder
 on shell
 C. Valachi

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 39852

Part Number: D206667203BL

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA089

2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-243.

3-Remove sand and plugs

4-Scribe part # and batch # using vibrating stylus as per Dwg D206-667-243

Inside of Cuff(Donot engrave on outside of tube)

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

8.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Polish entire outside surface of crosstube

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4:1

11.0

BENDING

BENDING MACHINE - SKIDTUBES



Comment: BENDING MACHINE

Bend tube as per Dwg D206-667-243 using CNC bender program 206L-AF and Folio FT_____

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 39852

Part Number: D206667203BL

Job Number:



Seq. #: Machine Or Operation: Description :

12.0

QC15

DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

13.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill all (3) top holes.

2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243
Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243.

6-Drill Fwd rivet holes using drill Jig DT8789FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8789 as per Dwg D206-667-243.

8-C'sink holes as per Dwg D206-667-243.

9-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-243

14.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

15.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

P-10

EL
8-6-18

IT 08 06 18

IT 08-06-18

5 08/06/18 (40)

5 08/06/18 (40)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206-667-203 BL PAR #: _____ Fault Category: Prod ~~At~~ tubes. NCR: Yes No DQA: D Date: 08/06/07
QA: N/C Closed: D Date: 08/06/07

NCR: <u>39852</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08-06-17	13.0	Employee drilled 3 holes on the aft. side of the cuff. R.C's Employee was interrupted, and did not verify work before proceeding again, lack of attention.	<u>05/14/07</u>	Add tube to DSI 9346	<u>mm</u> <u>080628</u>	<u>080625</u>	<u>05/14/07</u>	<u>080617</u>

NOTE: Date & initial all entries

Date: Friday, 13/06/2008 10:46:16 AM
User: Julie LeCocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 39852

Part Number: D206667203BL

Job Number:



Seq. #: Machine Or Operation: Description :

17.0 OUTSIDE SERV.10 OUTSIDE SERVICES -skids



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 038Or

Issue P/O: 66630

LPI as per ASTM 1417

Level 2 Attach copy of NDT results to work order

C203/06/24 ①

18.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage

Ensure copy of NDT results attached to work order.

Pc 8/2/08 ①

19.0 QC6 DIMENSIONAL CHECK

QC5



ml 08 06 24



①

Comment: Inspect for damage & ensure results are as per Dwg D206-667-103

20.0 D2873045 Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-045 Nut Plate 37341

ml 08 06 26

21.0 D2873043 Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-043 Nut Plate 37941

ml 08 06 26

22.0 MS20601AD4W10 RIVET



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Pick:

Qty Part number Description Batch

14 MS20601AD4W10 Rivet 107376

ml 08 06 26

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Drawing Name: 206L AFT X-TUBE

Job Number: 39852

Part Number: D206667203BL

Job Number:



Seq. #: Machine Or Operation: Description :

23.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install nut plates as per Dwg D206-667-243.

ml 08 06 26

24.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Mask Threaded holes

2-Prime inside and outside crosstube as per QSI 005 4.2

3-Paint outside crosstube DELFLEET BLUE

4-CLEAR WITH DELFLEET

ml 08 06 24 (1)

ISSUE P.O TO ATELIER DEROSSEPAGE

25.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

Wrap in plastic bag to protect from scratches

08 06 25 @

26.0

D2856400

Abrasion Strip



Comment: Qty.: 1.3525 f(s)/Unit Total: 1.3525 f(s)

Pick:

Qty Part number Description Batch
2 D2856-400 (Cut to 7.73") Abrasion Strip

DSI 9415
Pd 01.06.15

4 x D3595-075-450 Rubber Cushion

B 38959 ml 08 06 26

27.0

D28921

Support



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number Description Batch
2 D2892-1 Support

39836

ml 08 06 25

27.5
Pd 01.06.15

Magnabond 6398 B 107621

exp: 08/2009

ml 08 06 25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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User: Julie Leacock

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 39852

Part Number: D206667203BL

Job Number:



Seq. #:

Machine Or Operation:

Description :

28.0

MS2192022

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-22

Clamp

107545

ml 08 06 25

29.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Magna bond

1-Install abrasion strips as per QSI 035 using DT8580. Note: (3) top holes should be facing up.

ml 08 06 25 ①

2-Install supports and clamps as per Dwg D206-667-243. Torque clamps to 80-100 in lb

ml 08 06 26 ①

30.0

QC5

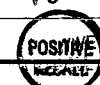
INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08 06 26 ①

08-06-26



31.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

32.0

AN534A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Bolt

Batch: 107013

sq

33.0

MS21042L5

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Nut

Batch: 107938

8/6/26

(1x)

SG

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 39852

Part Number: D206667203BL

Job Number:



Seq. #:

Machine Or Operation:

Description :

34.0

AN510A

Bolt



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:Packing Kit

Qty Part number

Description Batch

10 AN5-10A

Bolt

107013

107534

sq

35.0

AN532A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:Packing Kit

Qty Part number

Description Batch

4 AN5-32A

Bolt

106519

sq

36.0

AN960JD516

Washer



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Pick:Packing Kit

Qty Part number

Description Batch

18 AN960JD516

Washer

107952

8/6/26

sq

37.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

RECALL

38.0

PACKAGING 1

PACKAGING RESOURCE #1



ACTIVE 08/26/18 AUTH

BASED 08/26/18

DATE 08/06/26



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-667-203

Location:

PPP Rev:

Rev C

CHG 003

08-06-13

18/06/26

39.0

QC21

FINAL INSPECTION/W/O RELEASE



08/06/26

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



mf 08-06-26

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

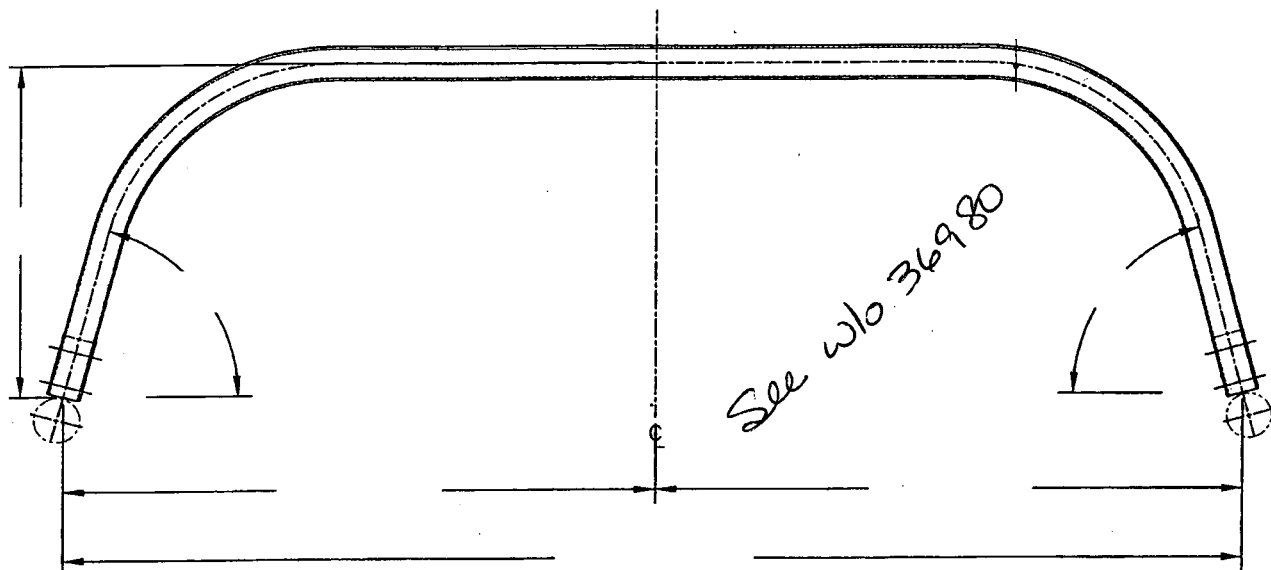
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	39852
Description: Crosstube High Aft (206L)		Part Number:	D206-667-203
Inspection Dwg: D206-667-243 Rev: B		Page 1 of 1	

Required Dimension	Min	Max
Height	23.46	23.58
1/2 Span	41.86	41.98
Angle	54	56
Total Span	83.72	83.96



Comments

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	<i>[Signature]</i>

DART AEROSPACE LTD		Work Order: 39852
Description: Crosstube Assembly		Part Number: D206-667-243
Inspection Dwg: D206-667-243 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Inspection Sheet	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.490	+0.005/-0.000					
	2.018	+0.005/-0.000					
	2.079	+0.005/-0.000					
	2.145	+0.005/-0.000					
	2.209	+0.005/-0.000					
	2.287	+0.005/-0.000					
	2.363	+0.005/-0.000					
	2.433	+0.005/-0.000					
	0.200	+/-0.010					
	0.500 x 30°	+/-0.010					
	R0.063	+/-0.010					
	R0.500	+/-0.010					
	4.438	+/-0.030					
SIDE B	104.91	+/-0.020					
	2.490	+0.005/-0.000					
	2.018	+0.005/-0.000					
	2.079	+0.005/-0.000					
	2.145	+0.005/-0.000					
	2.209	+0.005/-0.000					
	2.287	+0.005/-0.000					
	2.363	+0.005/-0.000					
	2.433	+0.005/-0.000					
	0.200	+/-0.010					
	0.500 x 30°	+/-0.010					
	R0.063	+/-0.010					
	R0.500	+/-0.010					
	4.438	+/-0.030					

See w/o 36780

Measured by:		Audited by:		Prototype Approval:	N/A
Date:		Date:		Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.09.01	New Issue (P/O D206-667-203)	KJ/JLM	

DART

DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED # DS	APPROVED # DS	DRAWING NO. D206-667-243	REV. B SHEET 1 OF 3
DATE 05.07.26		TITLE CROSSTUBE ASS'Y (206L HIGH AFT) NTS	
A	00.11.17	NEW ISSUE	
B	05.07.26	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	

RELEASED
05-07-26RH 01-06-13
UNDER REVIEW
06-08-10 RH
re-attach detail F

Qty	Part Number	Description
X	D206-667-243	CROSSTUBE ASSEMBLY
1	D6004-115	CROSSTUBE
2	D2856-400-773	ABRASION STRIP
2	D2873-043	NUT PLATE
2	D2873-045	NUT PLATE
2	D2892-1	SUPPORT
14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
4	MS21920-22	CLAMP

4 D3595-075-450 RUBBER CUSHION

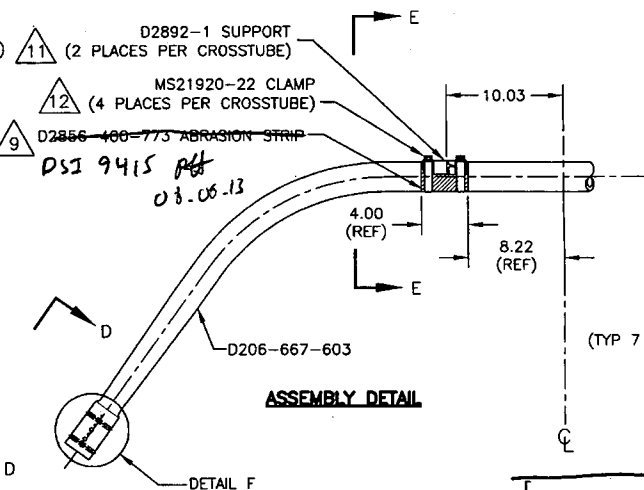
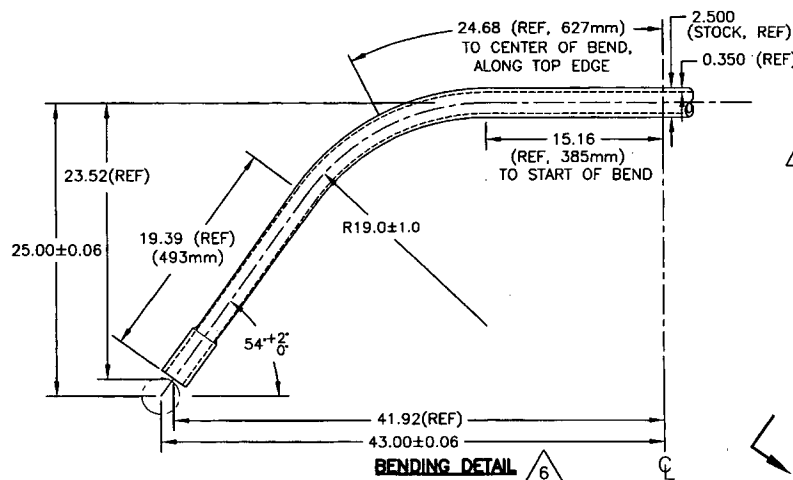
GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6004-115
FINISHED LENGTH = 104.91±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-773 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2892-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) IT IS OPTIONAL TO SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX-241/291 SEALANT.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 39852RH
06.06.13

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B $\varnothing 0.323^{+0.005}_{-0.000}$
(TYP 5 PLACES PER CUFF)
HOLE TO BE ALIGNED WITHIN ± 0.001
OF HOLE ON OTHER SIDE OF CUFF

PILOT $\varnothing 0.128$
C'SINK $\varnothing 0.225 \times 100'$
(TYP 7 PLACES PER CUFF)

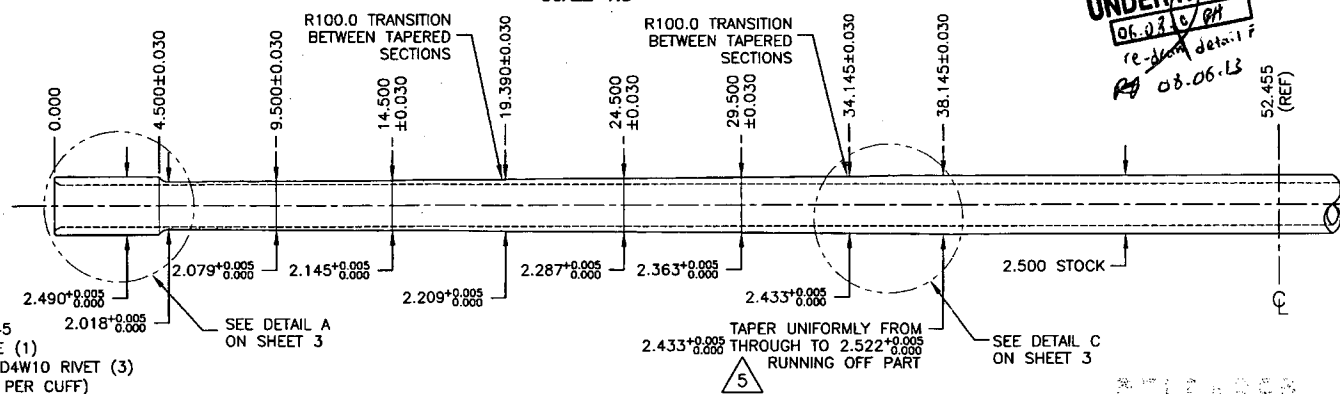
FWD

FWD SIDE ONLY

DETAIL F
SCALE 2:5

UNDER REVIEW
06.03.15/PH
re-look detail F
08.06.13

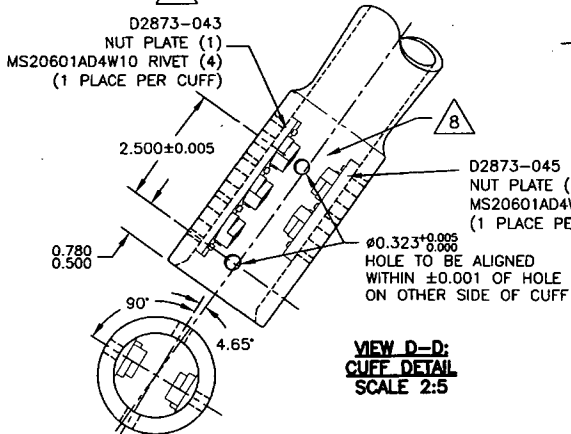
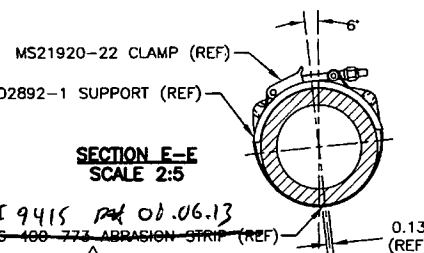
TURNING DETAIL
SCALE 1:5



SEE DETAIL A
ON SHEET 3

TAPER UNIFORMLY FROM
2.433 ± 0.005 THROUGH TO 2.522 ± 0.005
RUNNING OFF PART

SEE DETAIL C
ON SHEET 3

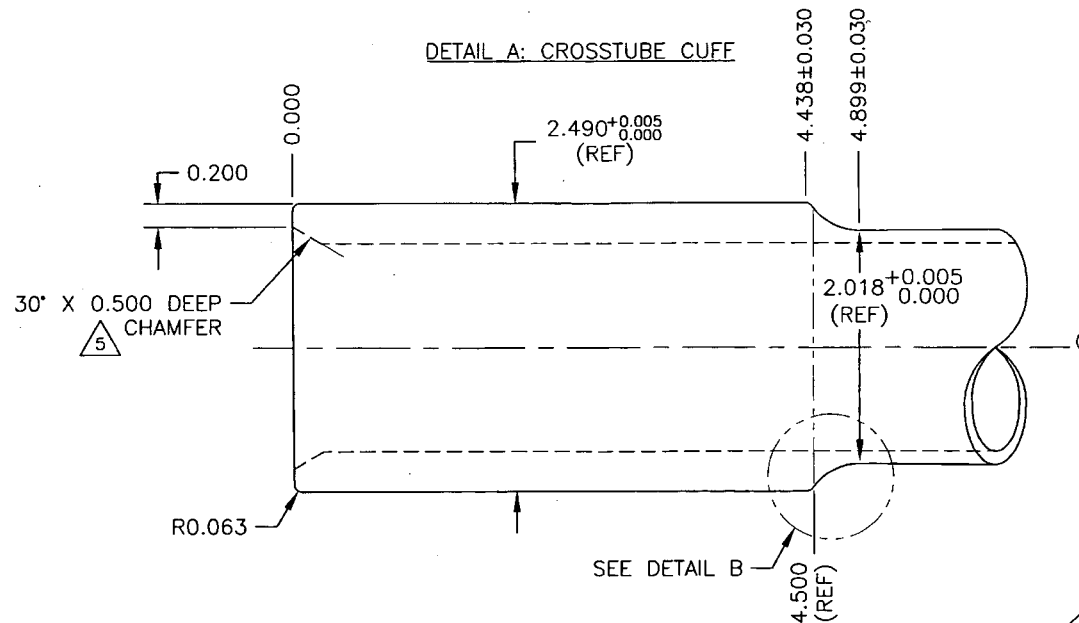


VIEW D-D:
CUFF DETAIL
SCALE 2:5

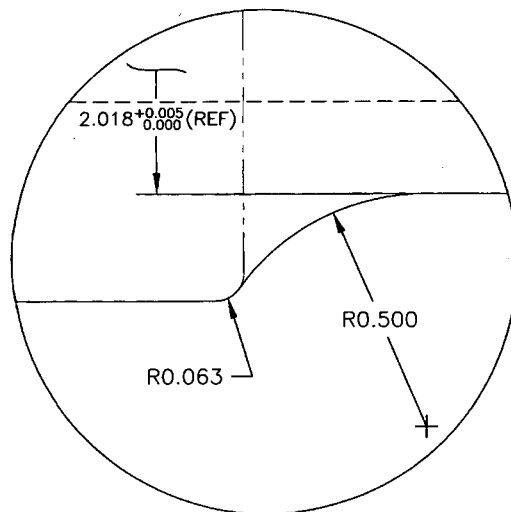
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 39802

COPYRIGHT © 2000 BY DART AEROSPACE LTD.		DESIGN	DRAWN BY	DART	DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA	REV. B SHEET 2 OF 3 SCALE 1:10
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		CHECKED #DS	APPROVED #DS	DRAWING NO. D206-667-243		
DATE 05.07.26		TITLE CROSSTUBE ASS'Y (206L HIGH AFT)				

DETAIL A: CROSSTUBE CUFF

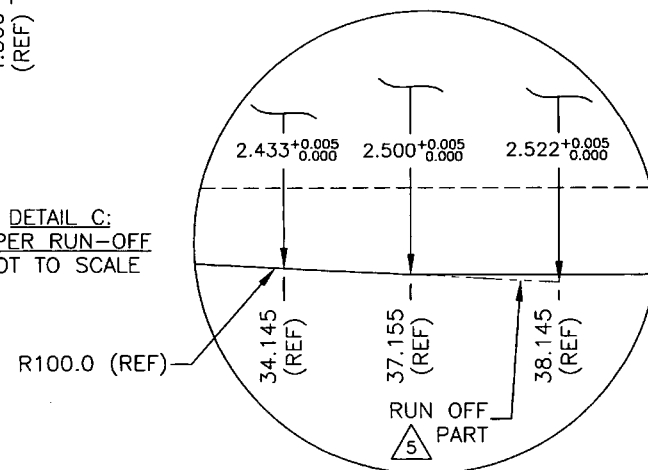


UNDER REVIEW
06.03.10 PH
rework detail F
PH 06.06.13



DETAIL B: CUFF
TRANSITION
SCALE 4:1

DETAIL C:
TAPER RUN-OFF
NOT TO SCALE



NO. 39852
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CHECKED PH DS		APPROVED PH DS		TITLE CROSSTUBE ASS'Y (206L HIGH AFT)	SCALE 1:1
DATE 05.07.26					

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-667 REV. C AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D206-667 REV. 2

REF: CANADIAN STC: SH01-5
REF: FAA STC: SR01304NY

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For D206-667-101/-201/-103/-203 or D407-667-105 cross tubes at CHG 003 or later, the D2856-400-694/773 abrasion strip has been removed, the center D2891-1 or D2892-1 support has been bonded onto the crosstube using Magnabond 6398 and D3595-075-395/-450 Rubber Cushions have been installed underneath the MS21920-20/-22 Clamps. Amend parts list of the IIN-D206-667 section 5 and ICA-D206-667 Section 32.8 as follows:

REMOVE:

ITEM	QTY -101	QTY -201	QTY -103	QTY -203	QTY -105	PART NUMBER	DESCRIPTION
13	2	2	2		2	D2856-400-694	ABRASION STRIP
14				2		D2856-400-773	ABRASION STRIP

ADD:

ITEM	QTY -101	QTY -201	QTY -103	QTY -203	QTY -105	PART NUMBER	DESCRIPTION
24	4	4	4		4	D3595-075-395	RUBBER CUSHION
25				4		D3595-075-450	RUBBER CUSHION

To prevent the supports from shifting on the D206-667-101/-201/-103/-203 or D407-667-105 crosstubes at CHG 002 or earlier, the D2891-1/D2892-1 supports should be removed and re-installed as follows:

- Follow section 32.1 of ICA-D206-667 for the removal of the crosstubes from the helicopter.
- Remove the qty (2) MS21920-20/-22 clamps from the crosstube that fasten the D2891-1/D2892-1 supports to the crosstube.
- Remove the D2856-400-694/-773 abrasion strip from the crosstube per section 32.5 of ICA-D206-667.
- Inspect the crosstube surface underneath the support for corrosion and mechanical damage per items 5.3.1 and 5.3.2 of the 300 hour inspection of ICA-D206-667. Repair damage within acceptable limits per item 5.3.3 of the 300 hour inspection in ICA-D206-667. Touch up finish per item 5.3.9 of the 300 hour inspection.
- Abrade area to which support will be applied with 400 grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe area until there is no residue.
- Apply a 0.03" to 0.06" thick layer of Magnabond 6398 underneath the D2891-1/D2892-1 support and re-install the support on the crosstube as shown in Figure 1. Position and secure the D2891-1/D2892-1 support on the crosstube using MS21920-20/-22 Clamps. Install a D3595-075-395/-450 Rubber cushion underneath each MS21920-20/-22 Clamp. Torque clamps 80-100 in-lb. Let the D206-667-101/-201/-103/-203 or D412-667-105 crosstube assembly cure as per the Magnabond 6398 instructions before re-installing the crosstube on the aircraft.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 08.05.26
CERT. NO.: SH01-5
ISSUE NO.: 3

A	NEW ISSUE	HS	08.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	HS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	HS		
CHECKED	PH	DRAWING NO.	REV. A
MFG. APPR.	EF	DSI 9415	SHEET 1 OF 2
APPROVED	TH	TITLE	SCALE
DE APPR.		CROSSTUBE SUPPORT CHANGE	NTS
DATE	08.05.26	COPYRIGHT © 2008 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

7) Re-install the D206-667-101/-201/-103/-203 or D412-667-105 crosstube per section 32.2 of ICA-D206-667.

For customers who would like to upgrade their D206-667-101/-201/-103/-203 or D412-667-105 crosstubes from CHG 002 or earlier to CHG 003, the following kit can be obtained from Dart:

QTY -011	QTY -043	PART NUMBER	DESCRIPTION
X		DSI 9415-011	CROSSTUBE SUPPORT CHANGE (USABLE ON D206-667-101/-201/-103 OR D407-667-105)
	X	DSI 9415-013	CROSSTUBE SUPPORT CHANGE (USABLE ON D206-667-203)
4		D3595-075-395	RUBBER CUSHION
	4	D3595-075-450	RUBBER CUSHION

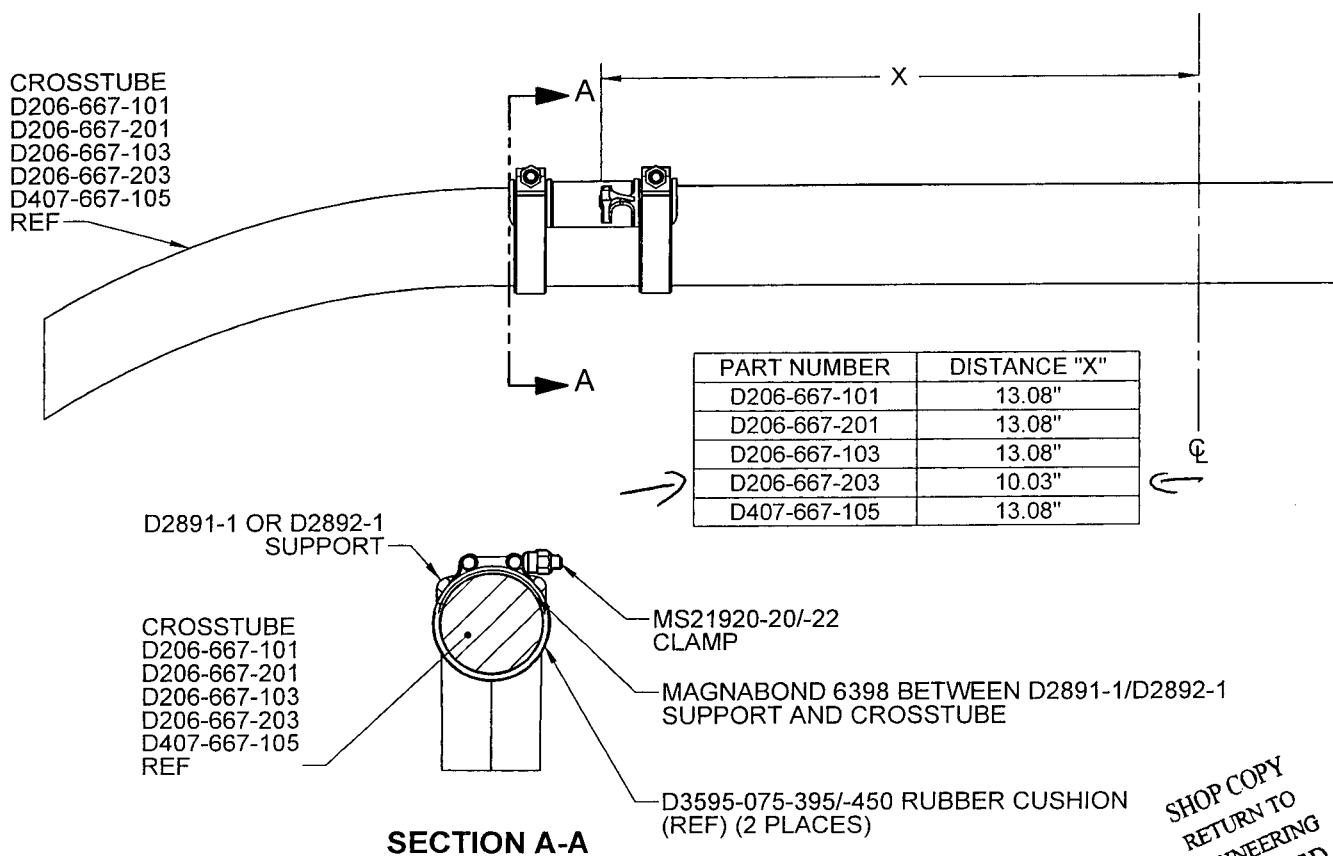


FIGURE 1 - CROSSTUBE SUPPORT

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CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: *D. Shepherd*
D. SHEPHERD (DE # 02)

DATE: 08.05.26
CERT. NO.: SH01-5
ISSUE NO.: 3

DESIGN	HS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	HS		
CHECKED	<i>PH</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>PH</i>	DSI 9415	SHEET 2 OF 2
APPROVED	<i>PH</i>	TITLE	SCALE
DE APPR.	<i>PH</i>	CROSSTUBE SUPPORT CHANGE	NTS
DATE	08.05.26	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

Date: Friday, 1/25/2008 10:54:27 AM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 206L AFT X-TUBE
 Job Number : 36980
 Estimate Number : 10973
 P.O. Number :
 This Issue : 1/25/2008 S.O. No. :
 Prsht Rev. : NC Part Number : D206667203
 First Issue : 1/1 Type : LANDING GEAR Drawing Number : D206-667-243 REV B
 Previous Run : 36382 Drawing Revision :
 Material :
 Due Date : 3/10/2008 Qty: 1 Um: Each
 Written By :
 Checked & Approved By :
 Comment : Est Rev: F 05.09.01 Add holes for compatibility with Bell
 Skidtubes KJ/JLM

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D206-667-203 CHG002

2.0

D6004115

Crosstube material



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D6004-115 Crosstube 1334685

Check OD = 2.500"; ID = 1.800"

BG 08-02-27

(1)

3.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA089

2-Turn first side as per Folio FA089

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-243.

BG 08-03-02

(1)

4.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

BG 08-03-02

(1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206-667-203 PAR #: _____ Fault Category: _____ NCR: Yes (No) DQA: 12 Date: 08/04/27
 QA: N/C Closed: _____ Date: _____

NCR: <u>36980</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08.03.24	11	HEIGHT OF TUBE, AFTER BENDING IS 23.7" ONE WIDTH IS 41.85" FIT IN JIG	CP 08.03.24 PV 08.1042	TUBE ACCEPTABLE.	N/A	✓ 08.03.24	CP 08.03.24 PV 08.1042	✓ 08.03.24

NOTE: Date & initial all entries

Date: Friday, 1/25/2008 10:54:28 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 36980

Part Number: D206667203

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA089

2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-243.

3-Remove sand and plugs

4-Scribe part # and batch # using vibrating stylus as per Dwg D206-667-243

Inside of Cuff(Donot engrave on outside of tube)

EC 08-03-02

①

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

EC 08-03-02

①

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

7/2/08/03/02

①

8.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



AWM 8-3-4



Comment: LANDING GEAR RESOURCE 1

1-Polish entire outside surface of crosstube

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

DP 8-3-4

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

JB 8-3-11

11.0

BENDING

BENDING MACHINE



Comment: BENDING MACHINE

Bend tube as per Dwg D206-667-243 using CNC bender program 206L-AF and Folio FT

EL 8-3-19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 1/25/2008 10:54:28 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 36980

Part Number: D206667203

Job Number:



Seq. #:

Machine Or Operation:

Description:

12.0

QC15

DIMENSIONAL CHECK OF X-TUBES



Pass 190



Comment: DIMENSIONAL CHECK OF X-TUBES

13.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill all (3) top holes.

2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243
Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243

6-Drill Fwd rivet holes using drill Jig DT8789FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8789 as per Dwg D206-667-243.

8-C'sink holes as per Dwg D206-667-243.

9-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-243

14.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

15.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 1/25/2008 10:54:28 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

*Job Number: 36980

Part Number: D206667203

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

OUTSIDE SERV.10

OUTSIDE SERVICES -LG



Comment: Sub-Contracting OUTSIDE SERVICES
Liquid Penetrant Inspection as per QSI 038Or
Issue P/O: _____
LPI as per ASTM 1417
Level 2 Attach copy of NDT results to work order

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Inspect for transit damage
Ensure copy of NDT results attached to work order.

19.0

QC6

DIMENSIONAL CHECK



Comment: Inspect for damage & ensure results are as per Dwg D206-667-103

20.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Mask Threaded holes

2-Prime inside and outside crosstube as per QSI 005 4.2

3-Paint outside crosstube with White Imron as per QSI 005 4.2

21.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint
Wrap in plastic bag to protect from scratches

22.0

D2873045

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)
Pick:
Qty Part number Description Batch
2 D2873-045 Nut Plate _____

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 36980

Part Number: D206667203

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

23.0	D2873043	Nut Plate Assembly
------	----------	--------------------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-043 Nut Plate

24.0	MS20601AD4W10	RIVET
------	---------------	-------



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Pick:

Qty Part number Description Batch

14 MS20601AD4W10 Rivet

25.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
------	----------------	-------------------------



Comment: LANDING GEAR RESOURCE 1

1-Install nut plates as per Dwg D206-667-243.

26.0	D2856400	Abrasion Strip
------	----------	----------------



Comment: Qty.: 1.3525 f(s)/Unit Total : 1.3525 f(s)

Pick:

Qty Part number Description Batch

2 D2856-400(Cut to 7.73") Abrasion Strip

27.0	D28921	Support
------	--------	---------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2892-1 Support

28.0	MS2192022	Clamp(per MIL-DTL-8783C)
------	-----------	--------------------------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-22 Clamp

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 1/25/2008 10:54:28 AM

User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 36980

Part Number: D206667203

Job Number:



Seq. #:

Machine Or Operation:

Description :

29.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips as per QSI 035 using DT8580. .Note: (3) top holes should be facing up.

2-Install supports and clamps as per Dwg D206-667-243. Torque clamps to 80-100 in lb

30.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

31.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

32.0

AN534A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

Batch: _____

33.0

MS21042L5

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Nut

Batch: _____

34.0

AN510A

Bolt



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:Packing Kit

QtyPart number Description Batch

10 AN5-10A Bolt _____

35.0

AN532A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:Packing Kit

QtyPart number Description Batch

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 1/25/2008 10:54:28 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 36980

Part Number: D206667203

Job Number:



Seq. #:

Machine Or Operation:

Description :

4 AN5-32A

Bolt

36.0

AN960JD516

Washer



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Pick: Packing Kit

Qty Part number Description Batch

18 AN960JD516 Washer

37.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

38.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-667-203

Location: _____

PPP Rev: _____

39.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



u 08/07.02

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	36980
Description: Crosstube Assembly	Part Number:	D206-667-243
Inspection Dwg: D206-667-243 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

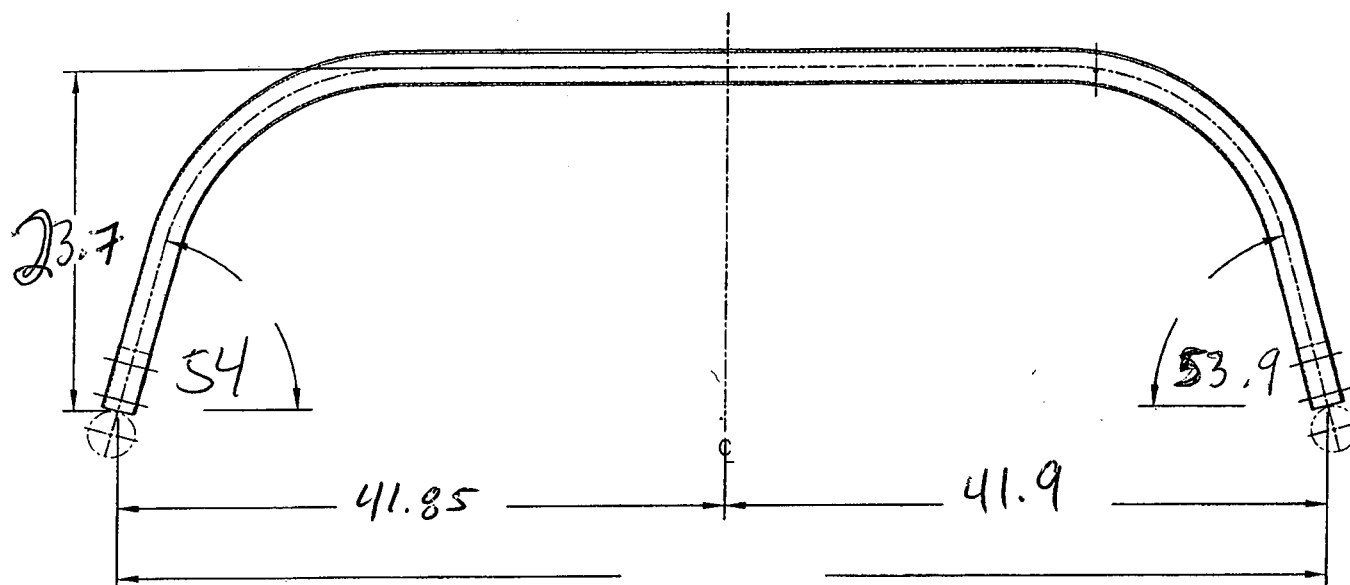
Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.490	+0.005/-0.000	2.492	✓		
	2.018	+0.005/-0.000	2.022	✓		
	2.079	+0.005/-0.000	2.083	✓		
	2.145	+0.005/-0.000	2.148	✓		
	2.209	+0.005/-0.000	2.213	✓		
	2.287	+0.005/-0.000	2.290	✓		
	2.363	+0.005/-0.000	2.364	✓		
	2.433	+0.005/-0.000	2.435	✓		
	0.200	+/-0.010	.200	✓		
	0.500 x 30°	+/-0.010	.500	✓		
	R0.063	+/-0.010	.063	✓		
	R0.500	+/-0.010	.500	✓		
	4.438	+/-0.030	4.438	✓		
SIDE B	104.91	+/-0.020	104.91	✓		
	2.490	+0.005/-0.000	2.493	✓		
	2.018	+0.005/-0.000	2.022	✓		
	2.079	+0.005/-0.000	2.082	✓		
	2.145	+0.005/-0.000	2.147	✓		
	2.209	+0.005/-0.000	2.213	✓		
	2.287	+0.005/-0.000	2.290	✓		
	2.363	+0.005/-0.000	2.364	✓		
	2.433	+0.005/-0.000	2.436	✓		
	0.200	+/-0.010	.200	✓		
	0.500 x 30°	+/-0.010	.500	✓		
	R0.063	+/-0.010	.063	✓		
	R0.500	+/-0.010	.500	✓		
	4.438	+/-0.030	4.438	✓		

Measured by:	BC	Audited by:	gmk	Prototype Approval:	N/A
Date:	08-03-02	Date:	08/03/03	Date:	N/A

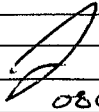
Rev	Date	Change	Revised by	Approved
A	06.09.01	New Issue (P/O D206-667-203)	KJ/JLM	JA



DART AEROSPACE LTD		Work Order:	36980
Description: Crosstube High Aft (206L)		Part Number:	D206-667-203
Inspection Dwg: D206-667-243 Rev: B		Page 1 of 1	

Required Dimension	Min	Max
Height	23.46	23.58
1/2 Span	41.86	41.98
Angle	54	56
Total Span	83.72	83.96



Comments
Tube is .055" too high above .051042 tolerance. Acceptable.

QC15 Inspection	
Date	080319

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM 	



DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED # DS	APPROVED # DS	DRAWING NO. D206-667-243	REV. B SHEET 1 OF 3
DATE 05.07.26		TITLE CROSSTUBE ASS'Y (206L HIGH AFT)	SCALE NTS
A	00.11.17	NEW ISSUE	
B	05.07.26	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	

RELEASED
05.07.26 -#

UNDER REVIEW

06.03.10 R4

12.07.01 detail F

RB

07.05.02

Qty	Part Number	Description
X	D206-667-243	CROSSTUBE ASSEMBLY
1	D6004-115	CROSSTUBE
2	D2856-400-773	ABRASION STRIP
2	D2873-043	NUT PLATE
2	D2873-045	NUT PLATE
2	D2892-1	SUPPORT
14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
4	MS21920-22	CLAMP

GENERAL NOTES:

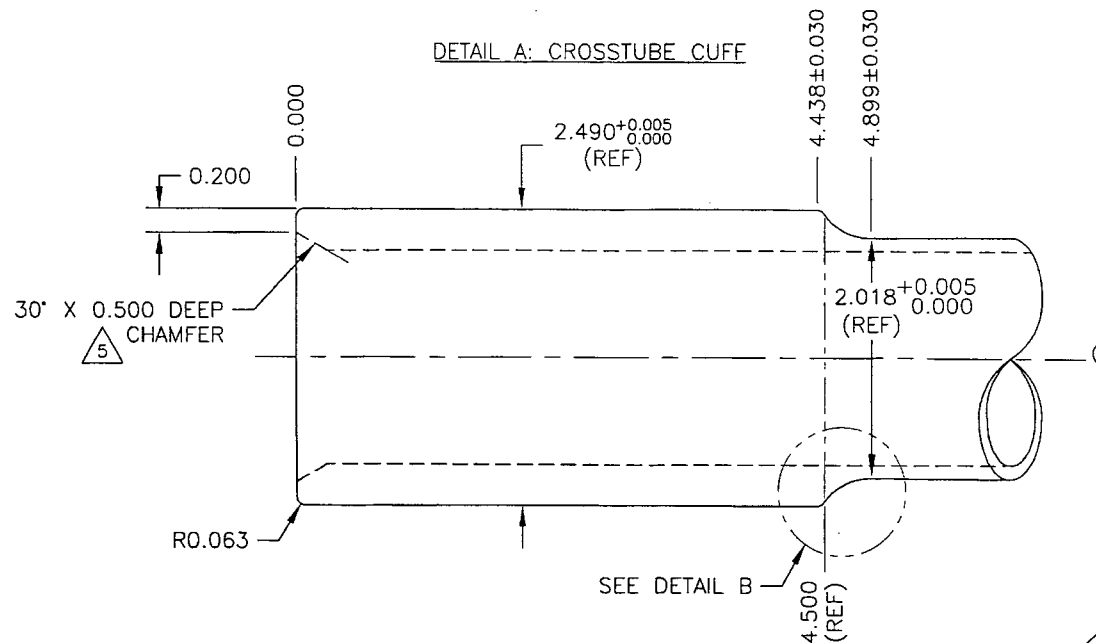
- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6004-115
FINISHED LENGTH = 104.91 ± 0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-773 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2892-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) IT IS OPTIONAL TO SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX-241/291 SEALANT.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

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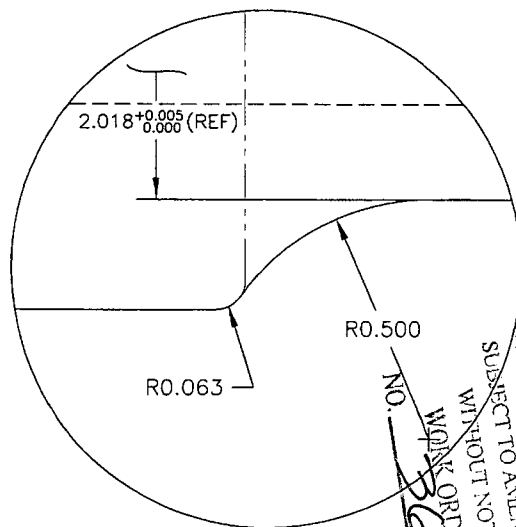
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DETAIL A: CROSSTUBE CUFF

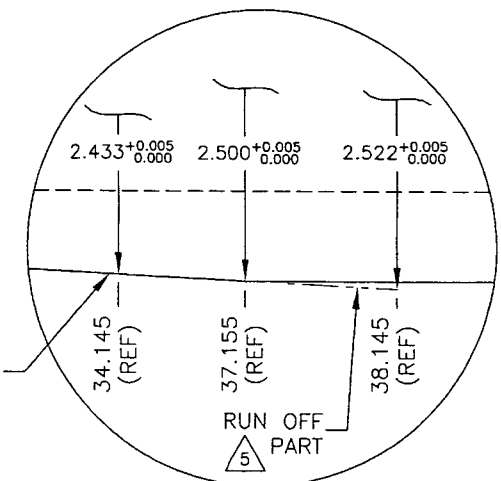


UNDER REVIEW
~~06.03.06 PH~~
~~EE-drawn detail F~~
 PH 07.05.02



DETAIL B: CUFF
 TRANSITION
 SCALE 4:1

DETAIL C:
 TAPER RUN-OFF
 NOT TO SCALE



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DESIGN PH	DRAWN BY PH	DART	DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA
CHECKED DS	APPROVED DS	DRAWING NO. D206-667-243	REV. B SHEET 3 OF 3
DATE 05.07.26	TITLE CROSSTUBE ASS'Y (206L HIGH AFT)	SCALE 1:1	

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Contact:

Description:

Report #'s:

Daily Time Report

E- 19897

Form dated Sep 2005

OART AEROSPACE

LINPA LACELLE

HAWKESBURY, ON

WENT ON X TUBES

P 1325.1

Job #:

• Sun

Tues

P.O. #:

395

JUNE 20.08

Thurs

Sat

188.08.1325

Camera #:

[illegible]

RADIOGRAPHIC UNIT PRICING

Weld Diameter											Long Seam					Circ. Seam				
Schedule / Thickness											Thickness					Thickness				
Quantity											Lineal Ft.					Lineal Ft.				

Pcs. 2 3/4 x 17"

Pcs. 3 1/2 x 17"

Pcs. 4 1/2 x 17"

Pcs. 14" x 17"

Pcs.

Consumables:

Equipment:

Client Representative:

EXPENSES

NOTES

(905) 825-8595 • Fax (905) 825-8598

(519) 336-3021 • Fax: (519) 336-8220

(705) 522-1849 • Fax (705) 522-9926

(902) 497-3870 • Fax (902) 445-5090

(705) 840-8107 • Fax (705) 476-6683

(819) 856-6789 • Fax (819) 825-9564

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(418) 392-3618 • Fax (418) 392-4114

(819) 360-0685 • Fax (819) 827-3513

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS: IIN-D206-667 REV. C
REF. CANADIAN STC: SH01-5
REF. FAA STC: SR01304NY

THE FOLLOWING D206-667-101/-103/-203 AND D407-667-105 CROSSTUBES HAVE EXTRA HOLES DRILLED ON THE AFT SIDE OF THE CUFFS. THIS HOLE IS NOT REQUIRED FOR INSTALLATION OF DART CROSSTUBES ONTO BHT/AAI SKIDTUBES AS SHOWN IN FIGURE 1.

CUSTOMERS RECEIVING CROSSTUBES AT CHG 002 PRIOR TO 06.08.08 SHOULD CONTACT DART FOR DISPOSITION IF INSTALLING THE DART CROSSTUBES ONTO BHT/AAI SKIDTUBES PER IIN-D206-667 REV. C.

CUSTOMERS RECEIVING CROSSTUBES AT CHG 002 PRIOR TO 06.08.08 TO BE INSTALLED WITH DART SKIDTUBES MAY FIND THAT THE SUPPORTS HAVE BEEN INSTALLED BACKWARDS. THE SUPPORTS SHOULD BE REMOVED AND RE-INSTALLED PER ICA-D206-667.

PART NUMBER	CHANGE NUMBER	BATCH NUMBER
D206-667-101	002	B24244, B28679, B29261
D206-667-103	002	B26702, B26704, B27980, B25606, B25605, B23220, B23219, B23218, B23217, B28682, B28683, B32644, B34139, B36053
D206-667-203	002	B27492, B27491, B27981, B25609, B25608, B25006, B24646, B34144, B36059
D206-667-203	003	B39852
D407-667-105	002	B31553
D407-667-105	003	B39271

H	ADD B39271, B39852	PH	08.06.16
G	ADD B36053, B36059	PH	08.01.17
F	ADD B34139, B34144	MB	07.10.22
E	ADD D407-667-105 & B31553	MB	07.08.14
D	ADD B32664	MB	07.07.24
C	ADD B29261	MB	06.11.20
B	ADD B28679, B28682, B28683	PH	06.10.10
A	NEW ISSUE	PH	06.08.08
REV.	DESCRIPTION	BY	DATE
DESIGN	REV	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	REV		
CHECKED	REV	DRAWING NO.	REV. H
MFG. APPR.	REV	DSI 9346	SHEET 1 OF 2
APPROVED	REV	TITLE	SCALE
DE APPR.	REV	DEVIATION ON D206-667 & D407-667	NTS
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CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 08.06.16
CERT. NO.: SH01-5
ISSUE NO.: 3

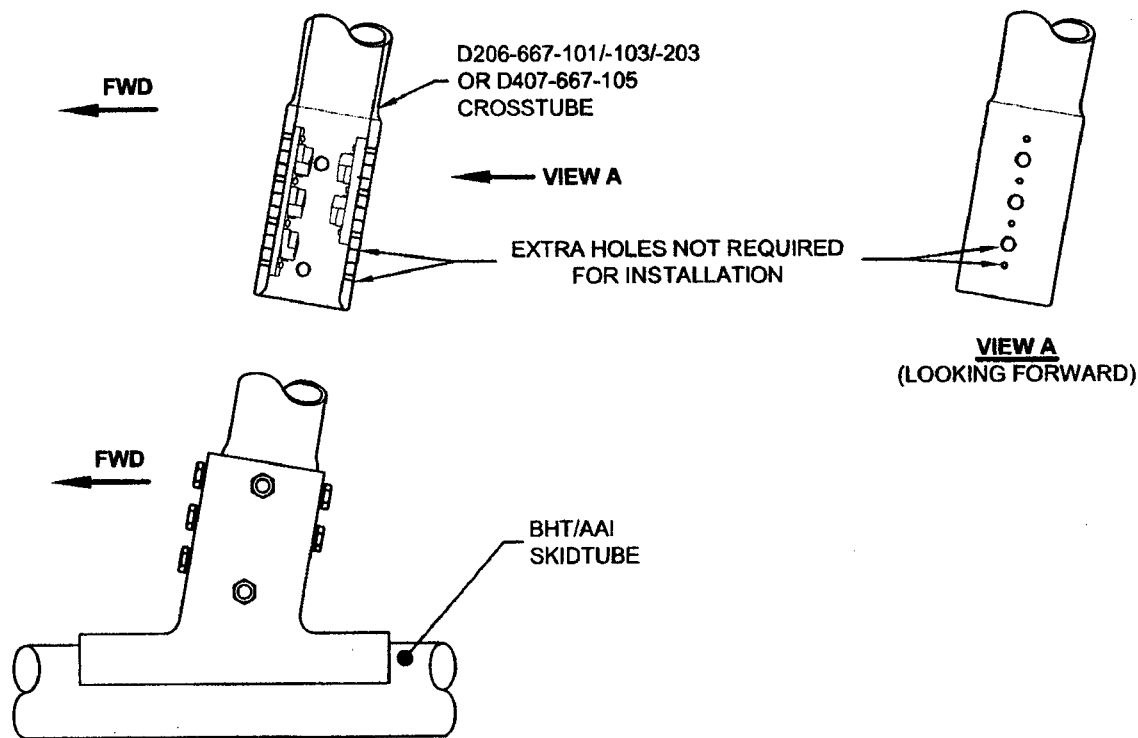


FIGURE 1 - INSTALLATION OF DART CROSSTUBES ON BHT/AAI SKIDTUBE

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 08.06.16
CERT. NO.: SH01-5
ISSUE NO.: 3

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
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CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. H
MFG. APPR.	<i>[Signature]</i>	DSI 9346	SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	DEVIATION ON D206-667 & D407-667	NTS
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